SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

Prepared for:
MUSCLE MX LLC
498 West 8360 South
Sandy, UT USA 84070

Muscle MX Activate CBD Plus Stick

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	
APS070122	Various	Unit	
Reported:	**Started:**	**Received:**	
23Sep2022	22Sep2022	19Sep2022	

Cert #4329.02
a3650f1df1ef4b739c240e4c8bc6b347.1

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Cannabinoids

Test ID: T000221560
Methods: TM14 (HPLC-DAD): Potency - Full Spectrum

Analysis, 0.3% THC	**LOD** (mg)	**LOQ** (mg)	**Result** (mg)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	4.959	16.501	<LOQ	0.10	
Cannabichromenic Acid (CBCA)	4.536	15.093	ND	ND	
Cannabidiol (CBD)	14.817	43.269	1136.766	15.16	
Cannabidiolic Acid (CBDA)	15.197	44.378	ND	ND	
Cannabidivarin (CBDV)	3.504	10.233	ND	ND	
Cannabidivarinic Acid (CBDVA)	6.339	18.512	ND	ND	
Cannabigerol (CBG)	2.815	9.369	ND	ND	
Cannabigerolic Acid (CBGA)	11.770	39.165	ND	ND	
Cannabinol (CBN)	3.673	12.222	<LOQ	0.09	
Cannabinolic Acid (CBNA)	8.030	26.721	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	14.022	46.659	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	12.734	42.375	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	11.283	37.544	ND	ND	
Tetrahydrocannabivarin (THCV)	2.561	8.522	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	9.952	33.116	ND	ND	
Total Cannabinoids			**1151.306**	**15.35**	
Total Potential THC			ND	ND	
Total Potential CBD			1136.766	15.16	

Final Approval

Karen Winternheimer
23Sep2022
04:25:00 PM MDT
PREPARED BY / DATE

Sam Smith
23Sep2022
04:35:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/a3650f1d-f1ef-4b73-9c24-0e4c8bc6b347

Definitions
LOD = Limit of Detection, ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation, PPB = Parts per Billion, % = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method). Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877)). Fail equates to a concentration level of Delta 9-THC, on a dry weight basis, higher than 0.3 percent + or – the measurement uncertainty. Total Potential THC is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step. Total THC = THC + (THCa *(0.877)). ALOQ = Above Limit Of Quantitation (defined by dynamic range of the method), CFU/g = Colony Forming Units per Gram. Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form. Examples: 10^2 = 100 CFU, 10^3 = 1,000 CFU, 10^4 = 10,000 CFU, 10^5 = 100,000 CFU.

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Heavy Metals

Test ID: T000223306
Methods: TM19 (ICP-MS): Heavy Metals

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Arsenic	0.04 - 4.34	ND	
Cadmium	0.04 - 4.45	ND	
Mercury	0.05 - 4.51	ND	
Lead	0.04 - 4.33	ND	

Final Approval


Daniel Weidensaul
04Oct2022
05:42:00 PM MDT
PREPARED BY / DATE


Sam Smith
04Oct2022
05:45:00 PM MDT
APPROVED BY / DATE

Residual Solvents

Test ID: T000223307
Methods: TM04 (GC-MS): Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	82 - 1650	ND	
Butanes (Isobutane, n-Butane)	177 - 3540	ND	
Methanol	61 - 1229	ND	
Pentane	97 - 1933	ND	
Ethanol	101 - 2015	ND	
Acetone	98 - 1954	ND	
Isopropyl Alcohol	104 - 2082	ND	
Hexane	6 - 114	ND	
Ethyl Acetate	99 - 1983	ND	
Benzene	0.2 - 4.1	ND	
Heptanes	101 - 2026	ND	
Toluene	18 - 359	ND	
Xylenes (m,p,o-Xylenes)	132 - 2639	ND	

Final Approval


Sam Smith
05Oct2022
03:09:00 PM MDT
PREPARED BY / DATE


Daniel Weidensaul
05Oct2022
03:11:00 PM MDT
APPROVED BY / DATE

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Microbial Contaminants

Test ID: T000223305
Methods: TM25 (PCR) TM24, TM26, TM27 (Culture Plating)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10^0 CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10^0 CFU/25g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10^2 CFU/g	$1.0x10^3$ - $1.5x10^5$	None Detected	
Total Coliforms*	TM27: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	

Final Approval

Brianne Maillot
06Oct2022
03:56:00 PM MDT
PREPARED BY / DATE

Courtney Richards
06Oct2022
04:37:00 PM MDT
APPROVED BY / DATE

Mycotoxins

Test ID: T000223308
Methods: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	**Result** (ppb)	Notes
Ochratoxin A	2.93 - 139.94	ND	N/A
Aflatoxin B1	1.08 - 34.95	ND	
Aflatoxin B2	1.18 - 34.78	ND	
Aflatoxin G1	1.14 - 35.29	ND	
Aflatoxin G2	1.14 - 35.93	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

Sam Smith
07Oct2022
07:03:00 AM MDT
PREPARED BY / DATE

Karen Winternheimer
07Oct2022
07:07:00 AM MDT
APPROVED BY / DATE

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Pesticides

Test ID: T000223304
Methods: TM17

(LC-QQ LC MS/MS)	**Dynamic Range** (ppb)	**Result** (ppb)		**Dynamic Range** (ppb)	**Result** (ppb)
Abamectin	343 - 2633	ND	Malathion	287 - 2726	ND
Acephate	40 - 2824	ND	Metalaxyl	44 - 2746	ND
Acetamiprid	42 - 2765	ND	Methiocarb	41 - 2930	ND
Azoxystrobin	50 - 2663	ND	Methomyl	37 - 2798	ND
Bifenazate	46 - 2726	ND	MGK 264 1	194 - 1566	ND
Boscalid	47 - 2837	ND	MGK 264 2	118 - 1126	ND
Carbaryl	41 - 2776	ND	Myclobutanil	47 - 2800	ND
Carbofuran	44 - 2712	ND	Naled	55 - 2715	ND
Chlorantraniliprole	47 - 2847	ND	Oxamyl	41 - 2767	ND
Chlorpyrifos	51 - 2754	ND	Paclobutrazol	47 - 2699	ND
Clofentezine	310 - 2221	ND	Permethrin	308 - 2693	ND
Diazinon	293 - 2768	ND	Phosmet	48 - 2711	ND
Dichlorvos	273 - 2757	ND	Prophos	280 - 2761	ND
Dimethoate	41 - 2727	ND	Propoxur	44 - 2742	ND
E-Fenpyroximate	288 - 2736	ND	Pyridaben	287 - 2748	ND
Etofenprox	49 - 2709	ND	Spinosad A	42 - 2135	ND
Etoxazole	291 - 2747	ND	Spinosad D	51 - 488	ND
Fenoxycarb	50 - 2707	ND	Spiromesifen	249 - 2787	ND
Fipronil	73 - 2722	ND	Spirotetramat	296 - 2679	ND
Flonicamid	53 - 2734	ND	Spiroxamine 1	17 - 1222	ND
Fludioxonil	293 - 2884	ND	Spiroxamine 2	23 - 1628	ND
Hexythiazox	42 - 2757	ND	Tebuconazole	292 - 2768	ND
Imazalil	248 - 2765	ND	Thiacloprid	42 - 2739	ND
Imidacloprid	51 - 2858	ND	Thiamethoxam	41 - 2737	ND
Kresoxim-methyl	50 - 2750	ND	Trifloxystrobin	53 - 2624	ND

Final Approval

Samantha Smith
Sam Smith
10Oct2022
07:15:00 PM MDT
PREPARED BY / DATE

K Winternheimer
Karen Winternheimer
10Oct2022
07:19:00 PM MDT
APPROVED BY / DATE

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